

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP02/13643

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ H01M4/02, 4/58, 4/38, 10/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ H01M4/00-4/04, 4/36-4/62, 10/40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1926-1996	Toroku Jitsuyo Shinan Koho	1994-2003
Kokai Jitsuyo Shinan Koho	1971-2003	Jitsuyo Shinan Toroku Koho	1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X P, Y	JP 2002-015729 A (Toshiba Corp.), 18 January, 2002 (18.01.02), Claim 1; Par. Nos. [0022] to [0024], [0027] to [0031], [0036] to [0038]; Fig. 2 (Family: none)	1, 4-9, 11, 12 2, 3, 10, 13
X Y	JP 2001-283833 A (Sanyo Electric Co., Ltd.), 12 October, 2001 (12.10.01), Claims 1 to 5; Par. Nos. [0010] to [0016] (Family: none)	1, 4-9, 11, 12 2, 3, 10, 13
Y	JP 11-288705 A (Toyota Motor Corp.), 19 October, 1999 (19.10.99), Par. Nos. [0009] to [0012]; Fig. 1 (Family: none)	2, 3, 10, 13

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search
15 April, 2003 (15.04.03)

Date of mailing of the international search report
30 April, 2003 (30.04.03)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 07-235330 A (Sony Corp.), 05 September, 1995 (05.09.95), Claim 1; Par. Nos. [0016] to [0027]; examples (Family: none)	2, 3, 10, 13
P, A	JP 2002-198036 A (Sony Corp.), 12 July, 2002 (12.07.02), (Family: none)	1-13
A	JP 10-241684 A (Sanyo Electric Co., Ltd.), 11 September, 1998 (11.09.98), (Family: none)	1-13
A	JP 08-213053 A (Canon Inc.), 20 August, 1996 (20.08.96), & US 5998063 A & DE 19544909 A & FR 2727794 A	1-13
A	JP 07-326342 A (Mitsubishi Cable Industries, Ltd.), 12 December, 1995 (12.12.95), (Family: none)	1-13
A	JP 07-094169 A (Yuasa Corp.), 07 April, 1995 (07.04.95), (Family: none)	1-13
A	JP 04-179050 A (Matsushita Electric Industrial Co., Ltd.), 25 June, 1992 (25.06.92), (Family: none)	1-13
A	JP 04-073862 A (Yuasa Battery Co., Ltd.), 09 March, 1992 (09.03.92), (Family: none)	1-13